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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,428	07/09/2001	Craig M. Whitehouse	840.052203	8546

7590 06/11/2002
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EXAMINER

ANDERSON, BRUCE C

ART UNIT PAPER NUMBER

2881

DATE MAILED: 06/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/901,428

WHITEHOUSE ET AL

Examiner

BRUCE C ANDERSON

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 33-39, 41-53, and 56-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 529,885 or Douglas (736) in view of Vestal (533), Sakairi (560), and Schwartz (022)

EP patent 529,885 and Douglas disclose an apparatus for analyzing chemical species comprising: at least two vacuum stages; at least one multiple ion guide (Douglas col.2, line 60 and EP Fig. 1) having plurality of plural poles; electrode elements located at the entrance and exit of said at least one guide; a time of flight spectrometer (TOF) located in said one of said vacuum stages; and means to apply

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voltages to said guide to trap and induce collisions in such to produce daughter fragments which may be then analyzed (see page 9, lines 53-54 of EP patent). Note EP patent discloses (page 10, lines 23-24) that said ion guide might have quadruple or octopole or hexapole set of rods. In both the EP and Douglas patents the TOF axis is parallel to the ion guide axis.

The ion sources of both the primary references are substantially at atmospheric pressure and can be electrospray (page 3, line 3 of EP or col. 4, lines 12-13 of Douglas). The EP reference also discloses that the at least one ion guide may serve as an ion trap and to filter out unwanted ions (page 6, second paragraph). The ion guide also reflects ions back-and-forth within the trapping space of said ion guide (see claim 1 of EP). Although an electrospray ion source is used in said primary references, the use of atmospheric pressure chemical ionization and inductively coupled plasma source are other well-known alternatives combined with an ion guide and MS, as taught broadly by Sakairi (col.5, line 6 and col.1, line 25).

The secondary reference to Vestal further discloses a similar arrangement but uses a series of ion guides (118,122), prior to the mass analysis by quadrupole (124) (Figure 5). Note fragmentation occurs in the second guide 122, prior to final analysis.

Hence, it is obvious to anyone of ordinary skill in the art that one can design a combination of an ion source of alternative types; at least one multipole, ion guide (quadrupole, octopole, or hexapole) that can be used as a CID with neutral background gas therein, to cause ion fragmentation; and a mass spectrometer.

Furthermore, once unwanted ions in said ion guide are ejected, the desired fragmented ions can be mass analyzed by removing the trapping voltages at the exit end of said guide and a pulse of ions would then enter said MS.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 54-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Are applicants trying to claim a procedure or method for processing for MS spectra? What specific means to accomplish this task is applicants' claiming with respect to said drawings?

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 54-55 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The step or means to subtract the mass spectra of unfragmented ion from the mass spectra of fragmented ions is not seen in the original disclosure.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claim 40 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-141 of U.S. Patent No. 6,011,259 in view of Whitehouse (427). Note Whitehouse (427) further discloses in claim 1 (d) that the ion guide may extend from one vacuum chamber to another.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRUCE C ANDERSON whose telephone number is 703-308-4851. The examiner can normally be reached on MON.-FRI. 6:15AM-3:45PM (off ALT. FRI.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN LEE can be reached on 703-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7721 for regular communications and 703-308-2864 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



BRUCE C ANDERSON

Primary Examiner

Art Unit 2881

BCA

June 6, 2002